(54) Title: RADIO COMMUNICATION SYSTEM, METHOD FOR CONTROLLING TRANSMISSION OF RECEPTION ACKNOWLEDGEMENT SIGNAL, AND RADIO STATION USED THEREIN

(54) 発明の名称: 無線通信システム及び受信確認信号送信制御方法並びにそれに用いる無線局
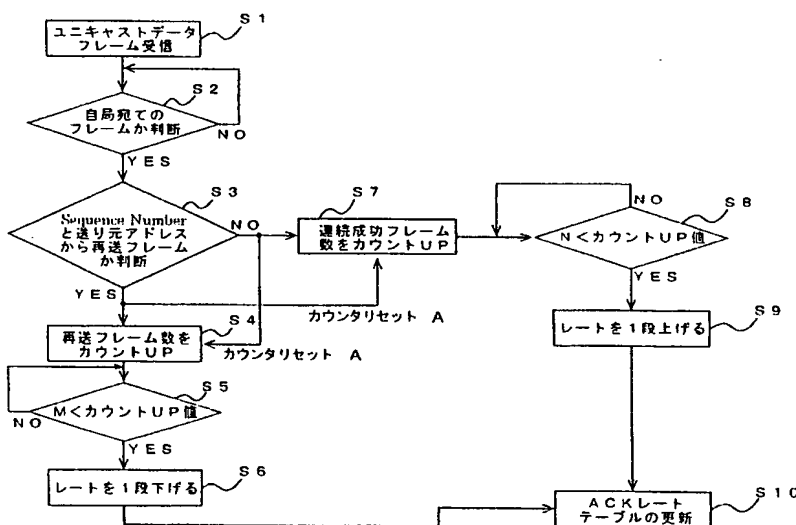
S1 UNICAST DATA FRAME RECEPTION
S2 DETERMINE WHETHER FRAME IS ADDRESSED TO LOCAL STATION
S3 DETERMINE, FROM SEQUENCE NUMBER AND TRANSMISSION SOURCE ADDRESS, WHETHER FRAME IS RETRANSMITTED FRAME
S4 COUNT UP NUMBER OF RETRANSMITTED FRAMES
A RESET COUNTER
S5 M COUNTED-UP VALUE
S6 REDUCE RATE TO NEXT LOWER RATE
S7 COUNT UP NUMBER OF CONSECUTIVELY SUCCESSFUL FRAMES
S8 N COUNTED-UP VALUE
S9 INCREASE RATE TO NEXT UPPER RATE
S10 UPDATE ACK RATE TABLE

(57) Abstract: A radio band can be effectively used in a radio LAN communication system where the data transmission rate is asymmetric between upstream and downstream lines. A transmission rate of ACK (reception acknowledgement signal) can be controlled based on the number of retransmissions of user data frames between AP (access point) and STA (mobile terminal station). That is, the number of retransmitted frames is counted. When the counted number is greater than a predetermined value (M), the ACK transmission rate is reduced to a next lower rate because the transmission quality of ACK is poor. Moreover, the number of consecutively successful frames is counted. When this counted number is greater than a predetermined value (N), the ACK transmission rate is raised to a next upper rate because the transmission quality of ACK is good. In this way, though the ACK transmission rate was conventionally decided dependently on the data frame reception rate, yet it is decided independently, so that the higher data transmission rate of downstream line is no longer dependent on the ACK transmission rate. Thus, the finite radio communication bands can be effectively used.

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